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ABSTRACT

The case study presented in this paper describes the thinking-in-action of a first grade teacher who, within the natural setting of her classroom, was constructing a new way of teaching language arts by changing to a whole language approach. In contrast to traditional implementation models, this study highlights the constitutive nature of innovation and accounts for the teacher's beliefs and values, her established version of practice, and her interpretation of the innovation. Data gathering and analysis occurred simultaneously and were based on observations of classroom activity, planning sessions, interviews, journal notes, and audio and video tapes of lessons. The bulk of the document deals with the composition of a new way of teaching described as "worldbuilding" that included: a new world of interaction between teacher and student with innovation constituted in the interaction; the initiation of "small conversations" composed of four worldbuilding patterns (participating as a learner/reader, naming actions, assuming possibilities, and changing boundaries); a view of the world that draws children in through patterned thought and action; and the ability of the teacher to interpret whole language through the lenses of her beliefs, values, and goals. A diagram of changing practice as a worldbuilding process is provided. (Contains approximately 75 references.) (LL)

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A CHANGE IN PRACTICE:

A Case Study of Teacher Thinking-In-Action

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Introduction

"It is time to break away. It is time to take risks, to push forward, to learn," wrote Cindy Jacobs on the October day she decided to change her teaching practice. Finding her current way of teaching incongruent with her growing understanding of emergent literacy, Cindy broke ground and began to construct a new way of teaching. How Cindy went about changing her practice is the focus of the study reported here.

I was led to this exploration of Cindy Jacobs' change in practice by an incongruity I perceived between the assumptions undergirding the literature on change and the picture of teacher thinking and classroom contexts. Generally, change studies reify innovations and place the teacher outside the innovation, reducing teaching to a lower level application activity (see for example: Crandall, 1983; Hord, Rutherford, Austin & Hall, 1987; Huberman & Miles, 1982; Loucks-Horsley & Hegart, 1985). This perspective has been shaped by the metaphors employed in the research on change. Early research on innovation diffusion (Ryan & Gross, 1943), rooting itself in the noneducational field of rural sociology, investigated the adoption by farmers of hybrid seed corn and fertilizer. This framework of diffusion, adoption, and application of a fixed innovation has guided the dominant school of research on educational change from its beginnings. Implementation models became strategy oriented in an effort to get malleable teachers to put the innovation into their classrooms (Common, 1982).

The perspective has not been without criticism. Almost two decades ago Berman and McLauglin (1975) questioned the diffusion literature's treatment of innovations as stable technologies which once adopted, proceed mechanically

through the stages of implementation. They found there was a process of mutual adaptation in which both the innovation and the setting were changed. In the last decade the focus for a few researchers has shifted to the meaning that an innovation holds for various individuals (see for example Fullan, 1982; Olson, 1980, 1987). However, implementation models have continued to frame the research on change, and models of change continue to be strategy oriented. The way the teacher teaches is assumed to be less important than reaching some external objective by which the success of the innovation will be judged (Common, 1983). To this end, instruments have been developed to monitor teachers more closely so that innovation is not adapted away (Hall, Loucks, Rutherford & Newlove, 1975; Hall & Loucks, 1981). These instruments rank teachers from those who have moved least or who have regressed in use of the innovation (Hord & Huling-Austin, 1986). The goal of moving individuals to the next stage is grounded in the assumption that the process of change is linear, and in an image of teachers as technicians rather than as professionals.

The current research on both teacher thinking and sociolinguistics compounds the issue even more. The bodies of literature brought to bear upon models of change render the metaphors and assumptions underlying change literature problematic. Studies of teacher thinking illustrate that teachers hold beliefs, knowledge, and goals (e.g., Elbaz, 1980; Munby, 1983) stored as wholistic thought-action patterns upon which they draw in a compositional/improvisational manner to build instruction (Yinger, 1987a). The sociolinguistic literature demonstrates that teaching/learning events are mutually constructed through the social interaction of students and teacher (Cazden, 1988; Erickson, 1986a). Given

these two bodies of literature, it is no longer adequate to reify innovations, to talk about innovation as implementation or application, or to focus on the teacher alone. In the study reported here, I explored the thinking-in-action of a teacher in the process of changing her practice in the natural setting of her classroom. In contrast to traditional implementation models, this study highlights the constitutive nature of innovation and accounts for the teacher's beliefs and values, her established version of practice, and her interpretation of the innovation.

Method

The study was conducted from an interpretive stance grounded in the belief that the mind constructs realities and that an understanding of the meanings and actions of participants in particular contexts is gained by intersubjective participation in that context. I selected participant observational field methods because I was interested in the specific structure of particular events and in the local meaning-perspective of the participant involved in these events (Erickson, 1986b).

The teacher participant in this study was Cindy Jacobs, a first grade teacher in a midwestern suburban school district. Cindy had begun, during her third year of teaching, to change her practice to become a whole language (Goodman, K., 1986) teacher. Participant observation began in January of that year. I observed the classroom activity from January, 1987 until the end of the school year in June, 1987 on an average of three times a week. I also observed Cindy in planning sessions at home and in school, at professional meetings at the local university and at informal times such as at lunch or in the school office. Conversations and informal interviews with Cindy were ongoing; they were

unstructured and open ended. Toward the end of the study, more formal interviews were conducted to focus on Cindy's knowledge and beliefs. In order to provide a retrievable record of interaction that permitted analysis of the teacher's gestures, expressions, and actions in the interactive context (Yinger, 1986), all observations were audiotaped and one teaching unit, that is, five days of reading/language arts instruction, was videotaped.

Data gathering and analysis occurred simultaneously (Schatzman & Straus, 1973). This provided a continual opportunity to explore patterns, clarify and refine information, and seek responses to new questions. Questions and reflections were recorded in the form of a research journal in order to capture emergent conceptualizations and to foster analysis (Glaser, 1978).

Accumulated field notes, Cindy's journal, and interview transcripts were reread regularly looking for recurring patterns of action and speech that had to do with changing one's practice. I also noted activities that warranted further observation or interviews. These were catalogued as categories emerged. Audiotapes and videotapes were not transcribed, but were indexed according to events recorded for later analysis. These observations and the other field methods documented the everyday activities of the teacher and her students in the natural setting of their classroom as the teacher composed a new practice. After leaving the field site, emergent patterns were confirmed in a systematic search of the full data base. Audio and video recordings provided an opportunity to focus on earlier events from the interpretive framework that evolved over the time of the analysis (Erickson, 1986b).

As a model of changing one's practice was developed, the full data base was searched for instances that would serve as evidence for the patterns of thinking-in-action. Each draft of the report of the study (Buswinka, 1989) was read by Cindy to serve as a cross check on my interpretation.

Innovating as World Building

Increasingly dissatisfied with her teaching because it was not congruent with what she was learning about literacy, and inspired by a longtime friend and mentor, Cindy Jacobs returned from an October workshop and began to keep a journal for her own professional development. What followed was a year of learning a new way of teaching. In Cindy's established version of practice, she selected the reading material and workpages. She met the children in reading groups or they worked by themselves with worksheets. Reading was an exercise. Cindy controlled the reading materials, the reasons for reading, and the reading lesson. Proponents of whole language, the innovative practice about which Cindy was learning, believe children learn to read and write by reading and writing for the same reasons more experienced readers and writers do so (K. Goodman, 1986; F. Smith, 1985). Fundamental to the practice of whole language is engaging children in authentic reasons for reading and writing.

Cindy entered into the innovative process framing it as a renovation of her existing practice. She brought to the renovation her beliefs and values, the current version of her practice, and what she knew of whole language. She worked from this perspective composing a new way of teaching. All three elements, her beliefs and values, the current version of her practice, and what she knew of the innovation, coalesced in the construction of a new way of living in Cindy's

classroom. As renovation makes change more sensitive to already existing meanings, the new practice that emerged included both former ways and new ways of being in the classroom.

I propose that this composing of a new way of teaching is best described as worldbuilding. Worldbuilding, or worldmaking as it is termed by philosopher Nelson Goodman (1978), consists of constructing a new way of seeing and organizing experience. My choice of the metaphor of worldbuilding to describe Cindy's change in practice is grounded in the constructivist epistemology of symbol-making (Goodman, N., 1978) and social cognition (Vygotsky, 1978), and in research on language and culture (Bruner, 1986), activity in everyday settings (Rogoff & Lave, 1984; Yinger, 1986, 1987c, 1988), and social interaction (Cazden, 1986).

Constructivism asserts that a "real world" does not exist separate from that which human minds and language create (Bruner, 1986). The mind is an instrument for constructing worlds with language and other symbol systems. The activity of constructing a world begins with a version of the world one has already constructed and that one stipulates as given (Goodman, N., 1978). Included among the processes of worldmaking are composition and decomposition, ordering, deletion and supplementation, and deformation. Bruner (1986) describes these processes of building worlds from previous versions:

> We compose and decompose worlds, impelled by different aims in doing so–practical as well as theoretical, now emphasizing constituent, now contingent features in our construction. We weight and emphasize features of previous worlds in creating new ones . . . We impose order, and since all

is in motion, the order or reordering we impose is a way, too, of imposing alternate stabilities (1986, p. 102-103).

It is this constitutive power of language to construct worlds that creates and negotiates culture (Bruner, 1986; Geertz, 1973). Social constructivists view the building of a culture, whether the culture of a classroom, or a broader culture, as a forum for negotiating and renegotiating meaning (Bruner, 1986). The matrix of the worlds that are constructed is located in the concrete social activity of everyday living (Vygotsky, 1977; Leont'ev, 1979). In activity, relationship is negotiated, meaning constructed, and culture created (Yinger, 1987c, 1988).

Important to note here in my setting forth the notion of changing one's teaching as a case of worldbuilding is the contention that the individual cognitive activity of worldbuilding is structured by the immediate interactional context. From this perspective, neither the setting nor the activity exist in realized form, but are dialectically constituted in interaction with one another as the setting is both generated out of the activity and at the same time generates the activity (Lave, Murtaugh, & de la Rocha, 1984). Place is fundamental to the creation of a world of significance (Yinger, 1988). As the construction of a world is constituted by the speech and actions of participants in a particular place and time, the activity and context, both physical and social, are inseparable (Rogoff & Lave, 1984). Worldbuilding then, particularizes the innovation in concrete human interaction.

Sociolinguists (Erickson & Shultz, 1977; Green, 1983) point out such speech and action is constructed moment to moment as participants make sense of situations. Classroom teaching-learning events are not givens, but are collaboratively constructed by the participants over the year as they live and work

together (Green, 1983; Mehan, 1979). The meanings of these patterns of interaction do not exist in the teacher's head, nor in the students', but in the interpersonal negotiation (Bruner, 1986). Through the conversation of living and working together, knowledge and beliefs are constructed as a shared world is built (Brown, Collins & Duguid, 1989). Taken together, this literature supports the metaphor for changing one's practice as one of building a new version of one's world of practice.

Pattern-building

Changing one's teaching involves developing new ways of thinking and doing (Fullan, 1985). Research on teacher thinking-in-action Yinger (1987b), which employs activity as the basic unit of analysis (Vygotsky, 1978), offered an alternative language with which to probe this teacher's change in practice. Yinger's research identified improvisation as the major method of interactive teaching (Dillard, 1987; Haley-Oliphant, 1989; Yinger, 1987b). Immersed in the complex situation of actual practice, teachers build up patterns of action upon which they draw in a compositional/improvisational manner. These patterns of action are composed of behaviors, activities, strategies, and routines that embody the set of meanings that frame the teacher's world. Borrowing an architectural metaphor (Alexander, 1979), Yinger suggests:

> The architect's means for creating meaning are form, structure, material, light, color, etc. The teacher's means are words and actions (as well as materials and environment). The architect creates ordered space. The teacher creates opportunities, occasions, and settings for interaction and growth (1987a, p. 313).

Each pattern is an expression of a relationship "between a context, a problem, and a solution" (p. 309) that manifests itself repeatedly, each time in a unique way. While teaching, the teacher does not build action from the beginning each time. In conversation with the student and the place, the teacher draws upon stored patterns to compose action and meaning in interaction with the students (Yinger, 1987a). In this analysis, I have used Yinger's notion of a pattern language of practice to explain Cindy's worldbuilding.

The Model: Cindy's Construction of a New World

Breaking ground is a process in all construction, albeit a change in the contours of a building or landscape, or a change in one's teaching. Cindy broke ground in naming the incongruity she felt between her established way of teaching and what she was learning about literacy. She wrote:

> I'm ruled by workbooks, competencies, sight words, tradition. It is time to break away . . . Teaching children to be powerful learners is essential (JN 10/19/86).

During the year of the study, Cindy's emerging understanding of the reading process led her to believe that the children should select their own books, based upon their purposes for reading and their personal interests, likes and dislikes. Her growing knowledge of how children learn to read also resonated with Cindy's strong beliefs about interaction and cooperation among the children. In the world Cindy wished to build, the children were to make choices about books, the stations at which they would spend time, and the classmates with whom they would work. The demands of the activity were to change. In changing the materials employed in learning to read and write and in allowing the children to select their own

books, Cindy changed the context of her interaction with the children. It is in changing the context that Cindy constructed a new way of teaching.

Cindy began to see her classroom in a new way. She began to set up her classroom differently, to build a framework of materials for the new world she envisioned. Cindy composed this framework by weighting it (Goodman, N., 1978) with books and the children's own writings. This framework became the place of their interaction (Yinger, 1988) and the beginning of Cindy's building the new world of interaction she envisioned. To create an opportunity for the children to read the books, Cindy reordered (Goodman, N., 1978) the day to include time for reading. She took an activity that had existed in rudimentary form in her original version of practice and gave it a central place in her classroom. She named it (Goodman, N., 1978; Schon, 1983) Reading Time. During Reading Time Cindy noticed different things than she did during reading groups. Cindy reframed (Schon, 1983) her teaching and discovered that "(t)here's a lot of things I'm still doing that I don't even want to be doing" (IN 1/27/87). In wishing, planning, and conceiving what was not yet real, Cindy rendered her classroom world subjunctive (Bruner, 1986); that is, she created a world of possibility, a place where it became possible for Cindy and the children to learn a different way of being in the classroom through collaboratively composing it.

I propose that in "taking up" the innovation, in immersing herself in whole language and working from within, Cindy produced a subjunctive world. Cindy's building of this subjunctive world and her acting within its boundaries were not separated in time. Rather, her envisioning of a whole language classroom and her constructing it were one act.

Cindy's overarching pattern of change is WORLDBUILDING. Employing a pattern of experimentation, JUST STARTING IN, she constructed a new way of being in her classroom. Cindy created the physical setting with materials, employing her planning pattern, SETTING UP THE ROOM, and the opportunities by reordering (Goodman, N., 1978) the day to include time for the children to read and write independently. She constructed the occasions by engaging in SMALL CONVERSATIONS with the children about the books they selected to read. The SMALL CONVERSATIONS, Cindy's pattern of thinking-in-action, are composed of four worldbuilding patterns, PARTICIPATING AS A LEARNER/READER, NAMING ACTIONS, ASSUMING POSSIBILITIES, and CHANGING BOUNDARIES.

These worldbuilding patterns are constellations of who Cindy is as a person with beliefs, values, goals, and a history; the current version of her teaching practice; and her knowledge of the innovation. Cindy's building was improvisational, artfully and skillfully composed in response to the moment (Yinger, 1987b) as the events were constructed anew each morning as Cindy and the children met in SMALL CONVERSATIONS. Cindy and the children lived and worked together in the new version they were constructing. Cindy "subjunctivised" this world (Bruner, 1986), drawing the children into her vision. In doing so she invited them to act differently. Together they composed the innovation, building a new world of interaction. The innovation is constituted in this interaction. BUILDING THE WORLD is accomplished by these patterns.

Following are descriptions of the WORLDBUILDING patterns beginning with JUST STARTING IN, Cindy's pattern of experimentation (see Buswinka, 1989 for more detailed descriptions and examples).

Just Starting In

"I want to know what my own meaning is. I want to have tried it, and maybe then change," Cindy explained her planning process. In choosing to become a whole language teacher, she placed herself in the situation of having to learn to think and act in ways congruent with a whole language perspective. Such learning can only be accomplished by becoming immersed in the innovation in order to be able to see the process from the inside. Because practical knowledge is context situated, it is by entering into the complex situation of actual practice that one is able to gain information about aspects of the practice that are otherwise invisible (Rogoff & Lave, 1984; Yinger, 1987a). At the same time, Cindy had an established way of teaching that she was not ready to abandon completely, even though she no longer wished to teach that way. Change strikes at the heart of the balance of forces that maintain one's practice (Fullan, 1982). She could not predict all that might occur, or even whether the change in practice would work for her. In any renovation, existing meanings cannot simply be abandoned.

Cindy entered the innovation and framed the change in her teaching as an experiment. To Cindy, this was an opportunity to try to teach a new way, and to see what meaning was there for her. By framing her worldbuilding as an experiment, Cindy accomplished three things. First, she gave herself permission to enter into the innovation, flexible and open to the unexpected, without abandoning her established version of practice. Second, framing her process as

an experiment allowed Cindy to create an opportunity for herself that is congruent with her belief that learning occurs when one is involved in a natural, purposeful activity "in a discovering, experimenting sense." (IN 4/15/87). Third, Cindy created an opportunity to play with new ideas, giving herself more operating room, thus making teaching exciting again.

JUST STARTING IN, Cindy's particular pattern of experimenting, was an expression of her stance as builder of the innovation. The following section describes Cindy as she sees herself. It is followed by an explication of the pattern, JUST STARTING IN, as a manifestation of her stance.

The Builder. As Cindy spoke of her teaching goals, she often reflected on her own learning, moving back and forth in conversation between her childhood, high school, college, and professional years. Her recollection of her own learning entered into the vision of what she wanted her own classroom to be. As Cindy changed her teaching, all these experiences shaped the solutions she sought (Schon, 1983).

Cindy believes that learning occurs when one is involved in a natural, purposeful activity. Newness and variety create excitement and a desire for involvement. The children's interaction with each other and active involvement with materials is also important to her. She has a disposition toward spontaneity and excitement and a particular sensitivity to the needs of individuals. This awareness of individual needs and being unable to meet them in her established way of teaching was a recurring dilemma and a major impetus to Cindy's changing her practice. Finally, Cindy thinks of learning as experimenting. Comments such as this were typical:

I did a lot of reading (about whole language). That was a turning point because then I felt a little more secure to try things, experiment a little more (IN 3/4/87).

An individual's life has a coherence constructed of images and symbols, (Hall, 1986; John-Steiner, 1985) and variously described as a narrative unity (Connelly & Clanindin,1986), life themes (Cszikszenmihalyi, 1979), or the "notebooks" of one's mind (John-Steiner, 1985). The way one acts is an expression of this coherence (John-Steiner, 1985); change often threatens it (Clanindin, 1986; Olson, n.d.). For Cindy, however, it was the current version of her practice that she felt did not cohere with who she is; entering into whole language gave her the permission she needed to build a world which resonated with the way she envisioned her classroom, thereby safeguarding fundamental values that make her teaching personally meaningful (Marris, 1974).

The manner in which Cindy did her worldbuilding also expressed this coherence. Cindy's proclivity for involvement, excitement, and spontaneity, and the high value she holds for experimentation, cooperation, and naturalness coalesced into a stance (Bruner, 1986; Yinger, 1987b) that characterized her worldbuilding and that drew the children in to build with her. That stance, one of the building blocks of Cindy's construction of a new way of teaching, was expressed in Cindy's thinking-in-action during the construction of her new practice in the patterned form of JUST STARTING IN.

The Pattern. JUST STARTING IN, Cindy's particular pattern of experimenting, refers to her manner of introducing a material or an activity into her classroom. Cindy introduced new activities and materials into her classroom

without working out the details in advance and looked to see whether the activity fostered responses and engagement consonant with her goals and values. This pattern provided Cindy with information about the innovation from within the process. It enabled her to observe the children's responses and engagement and to see what the activity looked and felt like from within the complexity of the context. This pattern also gave Cindy an opportunity to learn what the activity meant for the classroom world she envisioned. She was able to build up representations of new actions (Yinger, 1987a) with the intention of deciding if she wished to include them in her practice.

One example of JUST STARTING IN is Cindy's introduction of reading logs into her classroom. Cindy had read about the importance of children writing about their reading. She knew a colleague used reading logs and decided to try them herself. At first, reading logs seemed to work. Cindy noted in her journal that she thinks the logs not only help the children to focus on choosing an appropriate book, but they also enable her to keep track of what the children are reading and give her an opportunity to look at their written expression. A month later, however, immersed in the activity she sensed the logs did not foster the kind of response she wanted. She decided, having looked at the activity from the inside in the context of her larger goal, to shape the activity differently.

In her patterned manner of JUST STARTING IN, Cindy was characteristically herself: involved, natural, experimenting, and at the same time, looking for information from the particular situation in order to judge the worth of the activity for her goals. This pattern, JUST STARTING IN, allowed Cindy to collect information about the new activities and materials in the context

of her specific situation. It also served to help her integrate what she was learning with her own beliefs which enabled her to make the new practice her own. Cindy sees herself as a learner/experimenter, learning by becoming involved in experiences so that she can find her own meaning. She sees the children that way, too. The way she built in components of the innovation by JUST STARTING IN, is the way she envisioned the children working in the classroom. In JUST STARTING IN she was involved, natural, and experimenting, and creating just enough risk to make teaching exciting again.

Cindy's Interpretation of the Innovation. Cindy made sense of whole language through the lenses of her beliefs, values, goals, and knowledge, flattening certain aspects and forefronting others (Bruner, 1986). Her interpretation of the innovation evolved over the time of the study as she viewed it from the inside of the interactive context of practice. As the study began, when asked what her earliest thoughts on whole language were, Cindy talked about activities. By midyear, Cindy described whole language as an attitude about moving away from specific skills and toward learning experiences from which the children could draw meaning about their lives. She was not sure at this time whether she was describing whole language or what teaching should be. By the end of the year she commented:

> Now I am more focused in learning from the children and teaching them by watching them – how they learn rather than what they (other teachers) are doing around me (IN 6/15/87).

Immersed in innovating, and viewing whole language from the inside as she learned a new way to teach, Cindy gained a heightened sensitivity to her own

and her children's learning. It was this evolving concept of whole language gained from JUST STARTING IN that served as another building block in Cindy's construction of a new practice.

Setting Up The Room

Early in the study it became apparent that materials held a central place in Cindy's thinking as she built a new way of teaching. Materials included such items as books, learning stations, puppets, worksheets, media, and teacher-made materials. The impression was kaleidoscopic – materials appeared, moved to a place of prominence, and disappeared, only to reappear at a later date in a different place in a different configuration. Cindy refers to this kaleidoscopic change of material as SETTING UP THE ROOM.

Paramount in the dilemma that led to Cindy's change in practice was how to be available to individual children while keeping all others involved in purposeful reading and writing activities. SETTING UP THE ROOM, Cindy's planning pattern, allowed her to accomplish this. Cindy SET UP THE ROOM with books and other materials and then composed instruction with the books and writing the children brought to their interaction. As the setting itself began to engender the kinds of activities that Cindy envisioned (Barker, 1963; Kounin & Gump, 1974), this pattern allowed Cindy to respond to individual children while the others were involved in experimenting with reading and writing. SETTING UP THE ROOM changed the context of interaction in Cindy's classroom.

In setting up materials, Cindy visualized her students involved with the books and puppets and learning stations. Roughing in the frame with materials began to make the shape of her new practice visible. She began with broad,

general notions of the kinds of activities the materials would foster and worked out her understandings in the classroom by JUST STARTING IN.

In SETTING UP THE ROOM, that is, in building the material structure, Cindy's strategy was to first select from the materials that she had available, those materials that she believed would engender the kinds of activities she valued. Secondly, she provided time for the children to become involved with the materials, noting which materials engaged them and which did not. Thirdly, she changed materials to constrain, enlarge, or direct choices based upon the children's involvement and excitement and her own goals. The books and the children's writings became the place of Cindy's and the children's interaction. She experimented with whole language teaching within the constraints of the materials available. Her criteria were whether the material engendered the kind of activity she imagined in her virtual world. For Cindy, SETTING UP THE ROOM resolved a dilemma that had arisen as a conflict between her established practice, her beliefs and values, and her increasing knowledge about how children learn to read and write.

The Foundation: Cindy's Established Version. The activity of worldbuilding does not begin from scratch, but with a version of the world that one has already constructed and that one has stipulated as given (Goodman, N, 1978). Cindy's "given" version, which served as the foundation of her new practice, had been constructed during her two years of teaching.

A close look at her established version of teaching reading portrayed both the rudiments of a whole language perspective that was present in her classroom before Cindy had heard of whole language, and activities antithetical to a whole

language perspective that Cindy brought into the new world that she was constructing. The activities that composed reading groups best exemplify Cindy's observation, "I have two philosophies in my room now" (IN 12/16/86). As the study began, four different kinds of activities were happening in reading groups: plays, vocabulary, competency testing, and reading from the basal. Well before Cindy had heard of the new way of teaching she was to embrace, she had used plays as a reading activity in her classroom. She continued this activity experienced in her own school years in her classroom because she believes that plays give the children a genuine reason to read, an opportunity to interact with each other using language, a real audience to whom their activity is directed, and an occasion to develop confidence in speaking publicly. The activity continued, in its established form, in the new practice that Cindy constructed as she brought in a significant fragment (Goodman, N., 1978) of a whole language perspective constructed from her childhood school experience.

Vocabulary and competency testing were the next two kinds of activities that took place in reading groups. Cindy was troubled by having to have her less able readers read words in isolation as she knew that the research on reading did not support it. Lacking time to redesign vocabulary activities to fit with what she knew about vocabulary development, and aware of the political milieu in which she worked (Elbaz, 1980), Cindy brought the vocabulary and competency activities, unchanged for then, into the new world she was building.

Finally, the fourth and the core activity which comprised most of the reading group activities was reading a story from the basal. As the year went on, though Cindy increasingly questioned the soundness of this practice in light of

her new knowledge of emergent literacy, she was not ready to abandon the basal. What was at stake was far too important (Olson, 1987). The version of Cindy's world stipulated in this study as "given" (Goodman, N., 1978) in Cindy's third year of practice, was one that was dynamic and evolving. It contained contradictions characteristic of knowledge learned in practical situations (Olson, D., 1977). Cindy brought significant fragments of the current version of her practice into the building of her new practice. How Cindy composed Reading Time, that is, her pattern of thinking-in-action as she invited the children into the new world she envisioned, is considered next.

Small Conversations

Cindy's imagining of a new way of being in her classroom turned her attention to a new facet of her construction: drawing the children into this way of being. For teaching and learning to occur there must be a shared context for instructional communication (Rogoff & Gardner, 1984). Interaction in Cindy's classroom consisted primarily of SMALL CONVERSATIONS, Cindy's pattern of drawing the children in to build with her. The children selected books to read and topics to write about. Cindy initiated SMALL CONVERSATIONS about the books, introducing new ideas into the talk, picking up and developing topics introduced by the children, or building instruction based on the children's reading and writing. Together, Cindy and the children built SMALL CONVERSATIONS, their new way of being together. Each conversation was unique, embedded in the particular book or piece of writing that the child brought to the SMALL CONVERSATION. Cindy's overarching goals, her particular intentions for the day, the knowledge, beliefs, and values she brought to the interaction, and what

the children selected to read all coalesced as SMALL CONVERSATIONS to produce Reading Time. Cindy's interaction with the children in SMALL CONVERSATIONS made it possible for them to build a new way of living together in their classroom. Her language rendered Reading Time "newly strange" and filled it with possibilities that called upon the children to think differently about reading (Bruner, 1986). Cindy's activity in SMALL CONVERSATIONS engaged the children's imaginations to evoke a world where it is possible to experiment with reading and writing in order to become literate.

Cindy employed four world building patterns within SMALL CONVERSATIONS: PARTICIPATING AS A LEARNER/READER, NAMING ACTIONS, ASSUMING POSSIBILITIES, and CHANGING BOUNDARIES. Her building of the SMALL CONVERSATIONS was improvisational, that is, "a responsive, on-the-spot composition of action that relies on an extensive repertoire of conceptions and actions in the form of integrated and holistic patterns" (Yinger, 1989, p. 42). These SMALL CONVERSATIONS all occurred within the context of reading and talking about books, and the meeting place (Yinger, 1988) for the SMALL CONVERSATIONS that compose Reading Time. The innovation was constituted in this interaction. BUILDING THE WORLD was accomplished by these patterns.

Pattern One: Participating as Learner/Reader

Cindy participated as a more experienced learner among learners in her classroom, voicing her opinion of books and authors, reporting her own learning as it occurred, and describing the processes she used. This pattern, PARTICIPATING AS A LEARNER/READER, enabled the children to see

reading demonstrated (Smith, 1985) as the natural, functional activity of a literate person. The pattern was manifested in a variety of forms. One example is captured in a SMALL CONVERSATION in which Cindy modeled the reading process by thinking aloud:

Cindy: There you go. (She scatters books on the carpet in the circle of children and the children reach for them). Tell me what you do when you come to a word you don t know.

Aaron: Look at the picture - the page.

Cindy: (Nodding) Look at the picture.

Aaron: Skip it.

Cindy: Skip it and go on - and come back. See if you can figure it out. And think about what makes sense. That will help you the most.

Lucy: But what if you read a different page and come back to it and read it again, but -

Cindy: Well, read a little bit. Like this. Like if you didn't know this middle word, go "The (Cindy pauses as she runs her finger across the unknown word) cake." Go back. Look at the picture. "The-" look at the picture – Cindy points to the chocolate cake) "chocolate! The chocolate cake!" Cause it's – what you're reading has to make sense. Okay? (VT 5/7/87)

In making the process explicit, Cindy attributes to the children the ability to imitate her strategy (Schon, 1987). It also serves her goal of teaching the children to be independent readers. In this example, the improvisational character of

thinking-in-action is revealed as Cindy in conversation with the children and the books, skillfully weaves together the children's talk, the book they are reading, and her own PARTICIPATION AS A LEARNER/READER to compose the SMALL CONVERSATION. Her thinking-in-action, framed by her goals, beliefs, and values, is grounded in and responsive to the moment.

The pattern, PARTICIPATING AS A LEARNER/READER, although primarily aimed at building a classroom world where the children can see their teacher as a co-learner/reader thus drawing them into the literate world, also fills Cindy's larger quest to be able to be natural, true to herself, in her classroom.

Pattern Two: Naming Actions. As Cindy and the children talked about books and read together during Reading Time, Cindy saw certain actions in the classroom as examples of what she envisioned in the whole language classroom she was building. Cindy named (Goodman, N., 1978; Schon, 1987) actions she noticed, using them as building blocks to compose the innovation. This pattern, NAMING ACTIONS, served to affirm and order (Goodman, N., 1978) the children's activity, thus drawing them into the construction of the innovation.

In the example here, Cindy frames the event as an activity she wishes to encourage. Her actions reflect her belief that reading is a social activity and her value of cooperation. Working improvisationally, she picks up Beth's and Laura's activity and builds a SMALL CONVERSATION. She names their activity both verbally as "partner reading," and by her action of keeping it intact and walking over to witness it:

> Cindy calls Beth to read with her and notices that Beth and Laura are on the floor reading a Big Book together. "I'll come over there," Cindy says,

walking over to the girls. "Just keep reading like you were and I'll listen to you both." The two girls read in unison, each supporting the other. "Do you know what I like about this? You're helping each other as you're reading. That's great! Do you like partner reading?" Beth and Laura continue to read in unison, one filling in where the other hesitates and Cindy offering suggestions along the way (FN/AT 3/24/87).

NAMING ACTIONS makes explicit an action at the time the children are immersed in the experience. This makes possible tacit learnings such as the context in which the action is appropriate and allows Cindy to build with what the children are already able to do. Cindy drew them in to construct the innovation and named the world she was building as she was building.

Pattern Three: Assuming Possibilities. In learning to teach in a new way Cindy worked in the realm of possibilities. In the classroom she envisioned, Cindy presupposed children could select their own books to read, know why they choose or choose not to read a particular book, decide with whom and how they would read, and develop favorite books and authors.

This pattern, ASSUMING POSSIBILITIES, served to produce a subjunctive world (Bruner, 1986), a world which holds the possibility that rights and obligations will be different than they have been previously in her classroom. From the very first week that Cindy established Reading Time as a routine half-hour activity each day, she lived in the world she was creating as if it were already so. In the following example, Cindy ASSUMES POSSIBILITIES. The assumptions she makes are that Michael can know why he selects books, that Tom and Mark are able to plan how they will read together, and that Danny can

decide whether he wishes to read his book or only to look at the pictures. Working from the actions of the children, Cindy acts upon these presuppositions to compose the interaction, each conversation unique to the situation. Her thinking-in-action is responsively composed on the spot as she moves with the fluid situation. The children, as usual, are scattered around the room reading alone or in pairs. Cindy moves among them, stopping to talk about books.

Michael: I don't know. I just picked it out.

Cindy: It just interested you?

Michael: Danny was reading it and I decided I wanted to read it.

Cindy: Oh, it looked interesting and you thought since your friend liked it. Did you get a chance to bring that snowman book back?

Michael: (Inaudible)

Cindy: Did you turn it in?

Michael: Not yet.

Cindy: We'll turn it in after Reading Time. (Cindy walks over to Tom and Mark.) Are you reading it out loud together or how are you handling this today? Are you both reading?

Both: No.

Tom: He's looking at it with me and I'm reading.

Cindy: Okay, Mark, why don't you read it with Tom or take turns so you both are reading, and you can talk about the story at the same time.

(Cindy looks over to Danny and his book).

Oh, I see a cat. I love cats.

Mark: Where?

Cindy: In Danny's book.

Tom: I had a cat named Cashmere but he got ranned over.

Cindy: I'm sorry. Just like mine. Danny, did you decide you're just going to look at the pictures in this book today? Danny?

Danny: (Nods). (AT 1/13/87)

In acting upon her presuppositions, Cindy brings into the classroom implicit meanings that were not there before she began ASSUMING POSSIBILITIES of a different way of being. As the children take up the conversations she initiates, they are drawn into the subjunctive world Cindy is creating, a world in which rights and obligations are different than they have been in the children's reading groups.

Cindy responded to the children's actions during Reading Time as if they were efforts to reach shared goals (Newman et al, 1984). The children did not necessarily share these goals or know how to achieve them. Learning how to accomplish these tasks took place in the interaction between Cindy and the children in SMALL CONVERSATIONS as she ASSUMED POSSIBILITIES. In asking such questions as, "Which book did you choose today?" or "Do you have a favorite poem?" Cindy turned the child's activity into an example of accomplishing what she wished them to do. Her comments not only served to compose the activity of Reading Time, they also showed the children how what they were doing could be interpreted as accomplishing what she wishes them to do (Newman et al, 1984). In this way, Cindy's goals for the children were brought into the interaction making it possible for the children to participate in constructing a new way of being in their classroom.

Pattern Four: Changing Boundaries. In her SMALL CONVERSATIONS, Cindy enlarged the definition of reading and established new rights and obligations. The boundaries of reading in this classroom began to change. Cindy's pattern of CHANGING BOUNDARIES often took the form of her stating the norms of the world she was constructing. Many times CHANGING BOUNDARIES occurred at the beginning of Reading Time in the form of an announcement.

CHANGING BOUNDARIES serves two different goals. In some instances Cindy employed BOUNDARY CHANGING to enlarge the boundaries of what the children may read, where and with whom they may read, and the reading strategies they may use. In other instances Cindy used BOUNDARY CHANGING to set limits: one should select harder books as the year progresses, one should use the reading strategies one has been taught. Cindy was changing the academic task structure (Erickson, 1982) for reading in her classroom.

In one example, Cindy employed BOUNDARY CHANGING to enlarge a student's reading strategies to include using the sense of the passage to construct meaning. Cindy's improvisation was responsive and particular, shaped by the interaction of the student's reading process, the story she has chosen to read, and Cindy's knowledge and goals embedded in her patterned response. As Cindy is sensitive to moment, the manifestation is unique to the situation she and child compose.

CHANGING BOUNDARIES functions to keep the boundaries of Cindy's worldbuilding fluid. She used BOUNDARY SETTING both to enlarge and constrain as she shaped particular situations in composing her new practice.

Dwelling Together

In the SMALL CONVERSATIONS presented thus far, the particular pattern being explicated in each conversation was highlighted in the discussion to the exclusion of the other patterns in the conversation. However, the patterns of action which compose the SMALL CONVERSATIONS recurred in various configurations as Cindy's overarching goals, her knowledge, beliefs, and values, and the everchanging situation informed her improvisations as Reading Time was constructed anew each morning by Cindy and the children. SMALL CONVERSATIONS, typically brief, often occurred as Cindy scanned the room or walked among the children, composing the morning from the situations that presented themselves. In this example, Cindy noticed, from across the room, that Susan was not reading. Employing ASSUMING POSSIBILITIES and CHANGING BOUNDARIES to compose the SMALL CONVERSATION, Cindy brings into the interaction her goals that the children be able to choose books and that as an authentic community of readers they recommend books to one another. Her building is improvisational, weaving in what Leslie and Elizabeth bring to the situation as she responds to Susan to construct the world she imagines:

Cindy: Susan, do you need some help choosing a book?

Susan: (Nods from across the room)

Cindy: Yes? What kind of books do you like?

Susan: All kinds.

Cindy: Who has a good book to recommend to Susan? (She looks over to Leslie and then to Elizabeth who both hold up books.) Leslie has a good one. And so does Elizabeth.

A longer SMALL CONVERSATION the same morning illustrates how Cindy's worldbuilding patterns recur in various manifestations and configurations while she and Rebecca are talking. This conversation, as they all are, is embedded in the book and writing the child brings to the conversation. Cindy begins to compose the SMALL CONVERSATION with ASSUMING POSSIBILITIES, presupposing that Rebecca chose a Dr. Suess book for a reason and that she favors certain parts of a book over others. She then builds with Rebecca's obvious enjoyment, joining in and PARTICIPATING AS A LEARNER/READER as she and Rebecca enjoy the book together. Her composing is of the moment and particular to the situation:

Cindy: Hi, Rebecca . . .And you chose Dr. Seuss, a Dr. Seuss book. Whatever made you want to choose Did I Ever Tell You How Lucky You Are?

Rebecca: I had that book at home, but I really liked it, but it's all paper and it's all ripped, so I hardly ever get a chance to read it.

Cindy: Oh, so you like having one that's all put together.

Rebecca: Yah.

Cindy: Is this your favorite page?

Rebecca: No, I like this page. (Rebecca explains the illustration to Cindy; both are laughing.)

Cindy: Oh my gosh! You would have to start over before you were ready so you would get there when you needed to. Do you know what I'm saying?

Rebecca: Yah.

Cindy: It's silly. (They continue to laugh and talk).

While in conversation with Rebecca, Cindy is simultaneously building SMALL CONVERSATIONS with other students to maintain the world she and the children are constructing. The mornings continue in this manner until Reading Time is constructed anew on each particular day as SMALL CONVERSATIONS embedded in the books the children have selected compose the morning. Cindy and the children meet over their books building a new way of living and learning together. The patterned ways of being that compose the examples presented here are repeated over the thirty-two Reading Times that were observed. At the same time, each morning is unique. Although each pattern recurs again and again, each manifestation is unique as Cindy works in a compositional-improvisational manner to respond to the ever-changing setting.

The SMALL CONVERSATIONS Cindy and the children built were embedded in the books the children selected to read. Over the year, different books become available or are featured in author stations. Various books gain or lose popularity. Thus, the setting itself was generative (Lave, Murtaugh & de la Rocha, 1984). The children's particular choices, whether they were just beginning or had completed the book on which the SMALL CONVERSATION was built, their levels of reading fluency, and the topics they brought to the conversations all rendered the context dynamic and fluid. To this complex, unpredictable world in motion, Cindy brought her own goals, knowledge, beliefs, and values embedded in patterned ways of thinking-in-action. Her action, responsive to the situation at the moment, was improvisational, as she built in patterned ways shaped to each unique SMALL CONVERSATION.

On a larger level, each Reading Time was unique also. The four thought/action patterns dominating Reading Time were ordered differently each day in kaleidoscopic configurations so there was more ASSUMING POSSIBILITIES one day and little NAMING ACTIONS, and less BOUNDARY CHANGING another day and more PARTICIPATING AS A LEARNER/READER as Reading Time was produced each day. Cindy's own virtual world became increasingly differentiated as the year went on, but her WORLDBUILDING patterns were constant as she created a subjunctive world, a world of possibilities, and drew the children in her patterned ways of thinking-in-action.

Conclusions

I have proposed here that changing practice is building a new world of interaction. The innovation is constituted in this interaction. Cindy entered the innovation and lived in the new classroom world she envisioned as if it were already so, thus rendering it a subjunctive world, a world of possibility. Cindy's building of this world and her acting within its boundaries were embedded in the same activity. Her envisioning of a whole language classroom was not separate from her construction of it. As the children became involved with reading and writing, Cindy drew the children in to build with her. Together they composed the innovation as they constructed a new world of interaction.

Philosopher Martin Heidegger (1971) proposes that as humans build worlds, the result is the unfolding of an inexhaustible variety of patterns. In building the new world in which she and the children were to learn, Cindy initiated SMALL CONVERSATIONS. SMALL CONVERSATIONS were composed

of four worldbuilding patterns: PARTICIPATING AS A LEARNER/READER, NAMING ACTIONS, ASSUMING POSSIBILITIES, and CHANGING BOUNDARIES. I found Cindy's thinking-in-action to be highly improvisational as she employed the patterns that composed SMALL CONVERSATIONS in kaleidoscopic configurations in response to a context that was dynamic and fluid. Cindy composed Reading Time grounded in the ever-changing situations that presented themselves in conversation with her own goals, knowledge and beliefs. Each SMALL CONVERSATION was embedded in the book the child brought to the interaction and unique in its manifestation to the particular situation. On a larger level, each Reading Time was unique, also, as the four thought/action patterns that dominated Reading Time were employed by Cindy in different configurations each day.

The building blocks of Cindy's worldbuilding patterns included who she is as a person with beliefs, values, knowledge, and a history; the foundation version of her teaching practice, and her interpretation of the innovation. Teachers are often treated in the implementation literature as "black boxes" through which an innovation passes into the classroom in a more or less adequate configuration (Lampert, 1985), or worse, when expressing initiative and autonomy, are treated as impediments in the process (Clanindin, 1986). For Cindy, however, renovating her practice was a very personal endeavor. Her beliefs, values, and history coalesced into a stance that characterized her worldbuilding.

Change researchers who work from a technological perspective, when looking at implementation, have turned to the innovative practice, leaving the present version behind. Focusing on the individual, teachers have been described

as moving through "stages of use" of the innovation (Hord, Rutherford, Huling-Austin & Hall, 1987); or focusing on the innovation, use is measured in terms of extent of implementation, change in practice, and fidelity to the developer's core components (Loucks, 1983). The place of the teacher's current version of practice is not accounted for except in terms of regression to or moving little from that practice (Hord & Huling-Austin, 1986). The process of change is more complex than that. Cindy's interpretation of the innovation evolved over the time of the study as she interpreted whole language through the lenses of her beliefs, values, and goals and viewed it from the inside in the interactive context of the teaching. Cindy did not simply leave her current practice behind once she began to build the new version, but included in her worldbuilding significant fragments of her established way of teaching. Becoming a whole language teacher was not merely a process of substituting one practice for another. As reported in studies of other teachers (Olson, 1980, 1987) the introduction of an innovation into her classroom exacerbated dilemmas endemic in teaching and involved Cindy in critical comparisons between the innovative practice and well-thought-out practices already established.

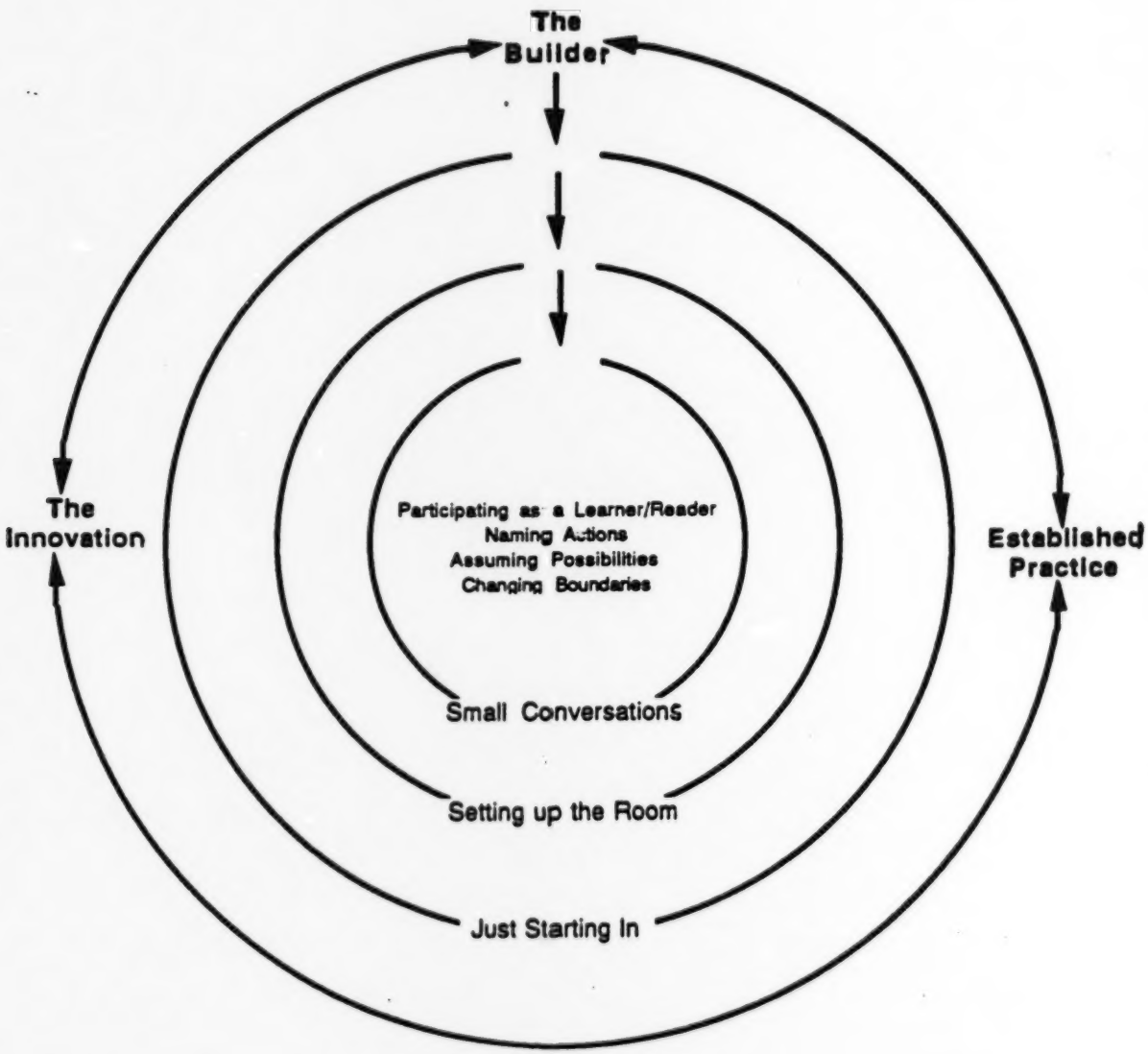
Hierarchical stage theories (Hall & Loucks, 1978, 1981; Hord & Huling-Austin, 1986) become problematic in light of the evidence presented here. They do not begin to capture the richness and complexity found in Cindy's worldbuilding. Her steps of construction, rather than moving Cindy higher or lower as on a stair case, which makes moving backward a regression (Hord & Huling-Austin, 1986), are more aptly captured by Gilligan's notion of contrapuntal themes or by Harris's (1988) reflections on women and teaching:

> But the series of steps I want to propose in contrast are in a different form: they are as steps in a dance . . . (A) more organic and human series of steps than the ladder and staircase are those which like the dance can go backward or forward, can incorporate one another, can involve turn and return, can move down as well as up, out as well as in, and be sometimes partnered, sometimes solitary. In the dance we do not come to the next step by planning it beforehand, but by doing the bodily work from which the next step emerges . . . each step is a dwelling place (pp. 14-15).

Each step for Cindy was a dwelling place. She lived the world she envisioned drawing the children in through patterned thought and action to build with her. Cindy's change in practice exemplifies Martin Heidegger's (1971) assertion:

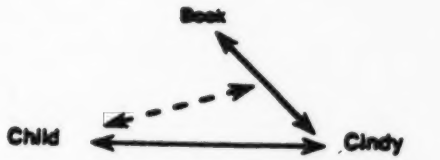
> What does the work as a work set up? Towering up within itself, the work opens up a world and keeps it abidingly in force.

In contrast to traditional change models, the model I propose highlights the constitutive nature of innovation. I suggest that in seeking to understand the process of changing practice, we need to look beyond the innovation itself or the teacher herself to explore the interaction of the teacher and students in the particular context where the change is occurring.

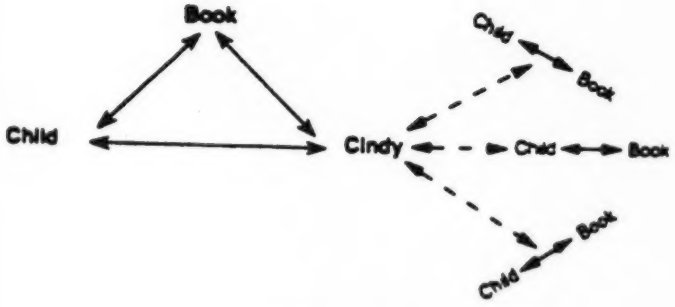


Changing Practice as Worldbuilding

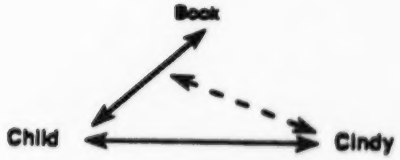
Just Starting In



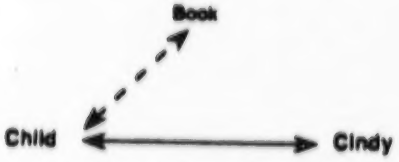
Participation as a Learner / Reader



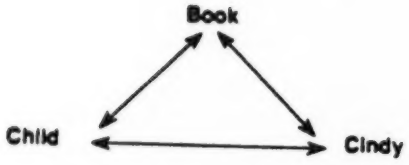
Setting up the Room



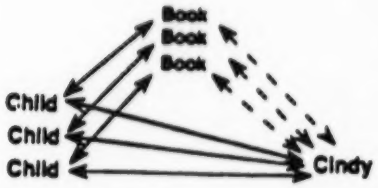
Naming Actions



Assuming Possibilities



Small Conversations



Changing Boundaries

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